

**Stop Sign Warrant based on Gram Traffic North Texas, Inc. Approach Counts (February 2015)
and Accident Reports from City Police Department
(Alister Lane at Morning Star Intersection)**

What are Warrants for Multi-Way Stop Signs per Section 2B.07 of December 2011 MUTCD Manual:

Condition A: Not Applicable.

Condition B. Criteria: Five or more reported crashes in a 12-month period that are susceptible to correction by a multi-way stop installation. Such crashes include right-turn and left-turn collisions as well as right-angle collisions.

Results from Data Collected:

- No accidents were reported at this intersection in a 12 month period.
- Condition B is not met.

Condition C. Criteria: Minimum Volumes

1. The vehicular volume entering the intersection from the major street approaches (total of both approaches) averages at least 300 vehicles per hour for any 8 hours of an average day; **and**
2. The combined vehicular, pedestrian, and bicycle volume entering the intersection from the minor street approaches (total of both approaches) averages at least 200 units per hour for the same 8 hours, with an average delay to minor-street vehicular traffic of at least 30 seconds per vehicle during the highest hour; but
3. If the 85th-percentile approach speed of the major-street traffic exceeds 40 mph, the minimum vehicular volume warrants are 70 percent of the values provided in Items 1 and 2.

Results from Data Collected:

- Number 1 is met above. The highest average based on the traffic count on Morning Star from both approaches was 775 vehicles from 5-6PM. The 775 vehicles counted exceeds the minimum 300 vehicles per hour for any 8 hours of an average day. The minimum 300 vehicles per hour were also exceeded between 6-9AM and 2-8PM.
- Number 2 is not met above. The average volume of vehicular traffic on the minor street of Alister Lane did not meet the 200 units per hour for any hour during the same 8 hours. The highest vehicular volume average was 91 vehicles for this minor street's approach to Morning Star occurring from 7-8AM. Bicycle and pedestrian volumes were not taken as part of this limited study.
- Number 3 is not met above. The 85th percentile approach speed of the major street traffic does not exceed 40 mph per posted speed limit.
- Condition C is not met.

Condition D. Criteria: Where no single criterion is satisfied, but where Criteria B, C.1. and C.2 are all satisfied to 80 percent of the minimum values. Criterion C.3 is excluded from this condition.

Results from Data Collected:

- Criteria B, C.1, and C.2 are not satisfied to the 80 percent of the minimum values.
- Condition D is not met.

Conclusion: A Multi-Way Stop Sign is not currently warranted at this intersection based on the data collected during this limited study.

GRAM Traffic North Texas, Inc.

1120 W. Lovers Lane
Arlington, Texas 76013

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MORNING STAR DR @ ALISTER LN - 60 MIN

Date Start: 03-Feb-15

Start Time	03-Feb-15 Tue	NB	SB	EB	Total
12:00 AM		18	8	2	28
01:00		16	4	1	21
02:00		6	12	2	20
03:00		7	15	0	22
04:00		12	44	5	61
05:00		24	119	14	157
06:00		62	340	30	432
07:00		135	594	91	820
08:00		127	295	29	451
09:00		78	142	26	246
10:00		91	124	15	230
11:00		134	130	12	276
12:00 PM		149	142	21	312
01:00		149	102	16	267
02:00		188	134	25	347
03:00		282	150	22	454
04:00		462	175	26	663
05:00		617	158	31	806
06:00		476	151	28	655
07:00		231	99	22	352
08:00		201	89	12	302
09:00		131	68	6	205
10:00		93	24	4	121
11:00		50	18	4	72
Total		3739	3137	444	7320
Percent		51.1%	42.9%	6.1%	
AM Peak		07:00	07:00	07:00	07:00
Vol.		135	594	91	820
PM Peak		17:00	16:00	17:00	17:00
Vol.		617	175	31	806
Grand Total		3739	3137	444	7320
Percent		51.1%	42.9%	6.1%	
ADT		ADT 3,528		AADT 3,528	

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MORNING STAR DR @ ALISTER LN - 15 MIN

Date Start: 03-Feb-15

Start Time	03-Feb-15 Tue	NB	SB	EB	Total
12:00 AM		3	1	2	6
12:15		4	4	0	8
12:30		7	0	0	7
12:45		4	3	0	7
01:00		5	1	0	6
01:15		4	1	0	5
01:30		1	2	1	4
01:45		6	0	0	6
02:00		1	1	0	2
02:15		1	3	0	4
02:30		1	6	2	9
02:45		3	2	0	5
03:00		3	2	0	5
03:15		3	2	0	5
03:30		0	7	0	7
03:45		1	4	0	5
04:00		3	6	0	9
04:15		4	14	1	19
04:30		2	12	0	14
04:45		3	12	4	19
05:00		3	18	3	24
05:15		8	19	4	31
05:30		4	38	2	44
05:45		9	44	5	58
06:00		7	44	6	57
06:15		10	72	2	84
06:30		21	105	8	134
06:45		24	119	14	157
07:00		30	124	16	170
07:15		26	132	19	177
07:30		45	196	28	269
07:45		34	142	28	204
08:00		40	100	13	153
08:15		48	73	2	123
08:30		26	76	4	106
08:45		13	46	10	69
09:00		12	46	8	66
09:15		19	38	4	61
09:30		20	38	8	66
09:45		27	20	6	53
10:00		15	29	4	48
10:15		20	31	3	54
10:30		25	32	6	63
10:45		31	32	2	65
11:00		28	30	4	62
11:15		30	34	4	68
11:30		47	32	2	81
11:45		29	34	2	65
Total		710	1827	227	2764
Percent		25.7%	66.1%	8.2%	
Peak		07:30	07:00	07:00	07:00
Vol.		167	594	91	820
P.H.F.		0.870	0.758	0.813	0.762

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MORNING STAR DR @ ALISTER LN - 15 MIN

Date Start: 03-Feb-15

Start Time	03-Feb-15 Tue	NB	SB	EB	Total
12:00 PM		36	44	9	89
12:15		43	34	2	79
12:30		31	34	4	69
12:45		39	30	6	75
01:00		34	25	7	66
01:15		44	24	7	75
01:30		37	28	0	65
01:45		34	25	2	61
02:00		31	42	3	76
02:15		59	32	10	101
02:30		52	24	8	84
02:45		46	36	4	86
03:00		48	45	7	100
03:15		51	25	6	82
03:30		74	48	5	127
03:45		109	32	4	145
04:00		95	42	8	145
04:15		115	46	6	167
04:30		128	39	7	174
04:45		124	48	5	177
05:00		145	35	9	189
05:15		162	40	7	209
05:30		152	48	7	207
05:45		158	35	8	201
06:00		140	39	2	181
06:15		137	46	11	194
06:30		113	34	9	156
06:45		86	32	6	124
07:00		66	30	7	103
07:15		57	26	5	88
07:30		58	23	5	86
07:45		50	20	5	75
08:00		52	24	1	77
08:15		64	18	6	88
08:30		43	26	2	71
08:45		42	21	3	66
09:00		36	24	1	61
09:15		33	14	3	50
09:30		32	14	1	47
09:45		30	16	1	47
10:00		22	8	1	31
10:15		30	7	2	39
10:30		23	4	0	27
10:45		18	5	1	24
11:00		14	5	0	19
11:15		12	6	2	20
11:30		11	4	0	15
11:45		13	3	2	18
Total		3029	1310	217	4556
Percent		66.5%	28.8%	4.8%	
Peak		17:00	16:00	18:15	17:00
Vol.		617	175	33	806
P.H.F.		0.952	0.911	0.750	0.964
Grand Total		3739	3137	444	7320
Percent		51.1%	42.9%	6.1%	
ADT		ADT 7,320		AADT 7,320	